

Space News Roundup

Vol. 32

September 6, 1993

No. 35

NASA gets approval of early retirement authority

JSC's Human Resources Office reports that NASA's request for early retirement authority has been approved, and that eligible employees will be able to take advantage of the option from now until Jan. 5.

The Office of Personnel Management approved the request on Aug. 23 and opened the window for early retirements on Sept. 1. A memo detailing all of the features of the early-out program is being sent to all eligible employees.

Employees who are eligible for the early-out option may also be eligible

for separation incentive pay, but Congress is not expected to vote on NASA's request for buy-out authority until later this week at the earliest.

"This option, along with our request for separation incentive pay, is being offered to help us reach the manpower reductions associated with the space station redesign," said Human Resources Director Harvey Hartman.

Early retirement is available to all employees—except Senior Executive Service workers and astronauts—who are at least 50 and have 20 years of service, and to

those who have 25 years of service at any age.

OPM has approved up to 261 early retirements for JSC, which is expected to accommodate all who want to retire. However, if requests exceed the allocation, approvals will be made in priority order based on the most senior service computation dates.

Civil Service Retirement System participants will have their annuities reduced by 2 percent for every year they are under age 55. For employees who had been covered under

CSRS but are now covered by the Federal Employees Retirement System, the reduction is applicable only to the CSRS portions of their annuities.

Early retirees will be eligible to continue their health and life insurance provided they were enrolled for five years prior to their retirement. Health insurance premiums will be the same as for employees, but the cost of basic life insurance will depend on the level of protection desired after age 65.

Since early retirement is voluntary,

there will be no alternative form of annuity such as lump sum.

Employees who have questions about the early-out option are encouraged to call their Human Resources representatives. Anyone who believes they may be eligible, but who did not receive the detailed memo is invited to contact the Employee Services Section at x32681. Employees also may request a retirement annuity computation or schedule and individual counseling session with a benefit specialist by calling the same number.



JSC Photo by

Flight Director Gary Coen explains the functions of the shuttle Flight Control Room to Russian Prime Minister Viktor Chernomyrdin, interpreter I.V. Smirnov, NASA Administrator Daniel S. Goldin and Russian Space Agency General Director Yuri Koptev.

Goldin challenges JSC to lead way for space station

By Kelly Humphries

JSC will need to keep its eye on the ball as it comes to bat as the host center for the redesigned space station, NASA Administrator Daniel S. Goldin told a cross-section of employees Monday.

This will mean big changes at JSC, he said, changes that will affect every person in every organization.

"We'll try to be as sensitive as we can to the human aspect, but unless we change we'll never do that space station for \$2.1 billion a year and we'll never operate the space shuttle safely for the kind of money we're going to have.

"If we're going to hold onto the space station and keep the space shuttle flying safely and perform Mission to Planet Earth and do planetary science, the thing that has to compress is the institutional bureaucracy," he added. "The choice that everybody has is to hold onto the bureaucracy and have an organization that does nothing but send memos to each other, or we'll go to the Moon and we'll go build a space station and we'll understand how we can control greenhouse gases."

Goldin shared his vision with a packed audience in Teague Auditorium just before meeting with Russian Federation Prime Minister Viktor S. Chernomyrdin, one of the highest-ranking Russian officials ever to visit the center. He also got the audience involved in problem-solving exercises aimed at encouraging those present to find more creative ways to

approach problems and to revise ineffective processes.

"There is going to be chaos," Goldin said. "We haven't been given a year or two to do this. There must be a radical change in the management structure of NASA."

Goldin stressed that the top priority in building the new space station must be the safety of its crew members, and encouraged employees to examine their motives for working in the space program.

"If you're part of the team that's working on space station, I ask you to give yourself a test. Do I believe in what I'm doing? Is this so important to me that I'm willing to set aside other issues? Am I so committed, I'm not going to worry about my individual self but I'm going to be part of something that's very important to human kind?" he said. "If you can't come forward with that, maybe we should find other activities for you. We're going to be under the eye of a microscope. One year from now we can't have paper, we've got to have hardware."

He also urged them to be courageous in their work, citing the example of David Schurr, who had gone to the blackboard earlier in the program to help work one of Goldin's problem exercises.

"The next time you have a problem, instead of holding it to yourself, instead of holding it within your section or branch, have the courage of David to not be embarrassed because you know you're working on

Please see GOLDIN, Page 4.

Russian prime minister visits JSC

American visit to end with talks about future cooperation

By Billie Deason

Russian Prime Minister Viktor Chernomyrdin, accompanied by NASA Administrator Daniel Goldin, visited JSC this past Monday.

At the beginning of the Russian delegation's tour, Goldin presented to Chernomyrdin a Russian flag flown aboard STS-54 in January 1993 and an Apollo-Soyuz Test Project crew patch flown aboard that mission in July 1975.

Goldin led the group on a tour of the space station mockup in Bldg.

9B. Chernomyrdin and a smaller group then toured the shuttle simulators in Bldg. 5. NASA Astronaut John Young "flew" Chernomyrdin on a typical shuttle ascent in the Shuttle Mission Simulator.

Meanwhile, Russian Cosmonaut Sergei Krikalev and other members of the STS-60 crew briefed and toured the other delegates through the Shuttle Full Fuselage Trainer in Bldg. 9A.

The entire group then visited the Mission Control Center shuttle

Flight Control Room in Bldg. 30 before leaving JSC.

Chernomyrdin toured Kennedy Space Center on Tuesday, and on Wednesday began two days of meetings with Vice President Al Gore to discuss further U.S. and Russian cooperation on projects to learn more about outer space.

Chernomyrdin was accompanied by Russian Space Agency General Director Yuri Koptev and Russian Ambassador to the United States Vladimir Lyukin.

Discovery almost ready for Friday launch attempt

By James Hartsfield

All preparations for a 6:39 a.m. CDT Friday launch of *Discovery* on STS-51 remained on schedule last week as technicians wrapped up installation and testing of three main engines.

The STS-51 crew—Commander Frank Culbertson, Pilot Bill Readdy, and Mission Specialists Jim Newman, Dan Bursch and Carl Walz—are to depart JSC Tuesday morning for KSC. The countdown is set to begin at 7 a.m. CDT Tuesday.

With an on-time launch, all mission activities will follow the original schedule, with the first order of

business the deployment of the Advanced Communications Technology Satellite a few hours after

reaching orbit. The second day of the flight will be highlighted by the deployment of the Orbiting and Retrievable Far and Extreme Ultraviolet Spectrometer mounted on a Shuttle Pallet Satellite. The ORFEUS telescope will fly free of *Discovery*, about 30 nautical miles away, for six days to peer into the origins of stars before it is picked up and returned home by the crew. Walz and Newman will perform a six-hour space walk, another in a

Please see COLUMBIA, Page 4

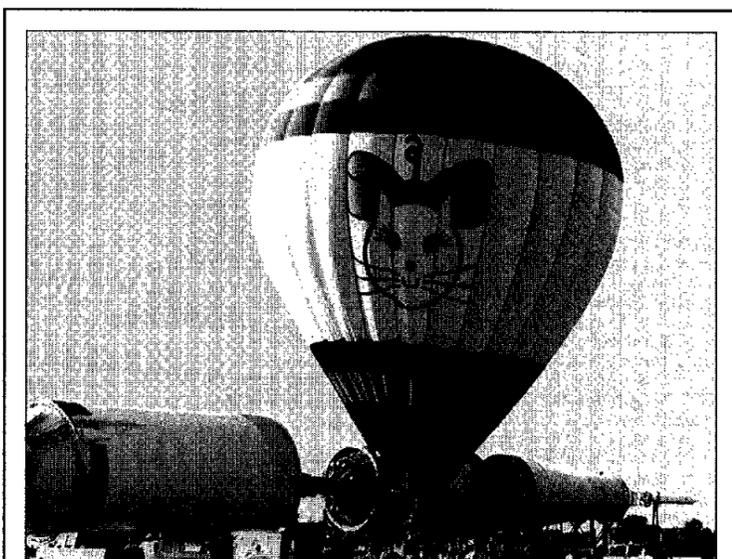
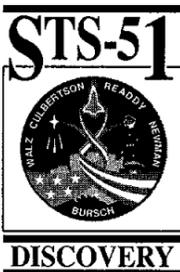


Photo by B.J. Tamaro

BALLUNAR LIFTOFF '93 — Pilot Kitty Schwartz prepares to join some 30 balloons that participated in a 200th anniversary celebration of lighter-than-air flight at Rocket Park on Aug. 28.

Team to explore Mars Observer follow-up options

A NASA-led team of scientists will explore possibilities for a return mission to Mars to recover some of the scientific objectives of the Mars Observer mission, if communications cannot be reestablished.

NASA Administrator Daniel S. Goldin named Dr. Charles Elachi, assistant laboratory director at NASA's Jet Propulsion Laboratory, to lead the team Wednesday.

The team will look at a variety of low-cost spacecraft, instrument and launch options, with the objective of returning to Mars in 1994 or 1996. It also will review available spacecraft and instrument options from industry and government, including Mars Observer spares and possible international contributions. The team is expected to present options to NASA within the next two months.

JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Store from 10 a.m.-2 p.m. Monday-Thursday and 9 a.m.-3 p.m. Friday. For more information, call x35350 or x30990.

EAA Deep Sea Fishing Trip, Sept. 18 on the Cavalier; \$45 to fish, \$20 to ride. Moody Gardens — Discount tickets to three of five attractions: \$14. Six Flags Over Texas — Discount tickets: one-day pass, \$19.95; two-day pass, \$24.95 and children under four feet, \$18.95. Splash Town USA — Discount tickets: \$10.50. Astroworld — Discount tickets: adult, \$18.95; children under 4 1/2 feet, \$15.95. Waterworld — Discount tickets: \$9.95. Sea World in San Antonio — Discount tickets: adult, \$19.75; child (3-11), \$13.15. Fiesta Texas, San Antonio — Discount tickets: adult, \$18.35; child (6-11) \$12.75. Space Center Houston — Discount tickets: adult, \$7.50; child (3-11) \$4.50; commemorative: \$9.95. Metro tickets — Passes, books and single tickets available. Movie discounts — General Cinema, \$4.50; AMC Theater, \$3.75; Loew's Theater, \$4.

JSC

Gilruth Center News

Sign up policy — All classes and athletic activities are first come, first served. Sign up in person at the Gilruth Center and show a NASA badge or yellow EAA dependent badge. Classes tend to fill up two weeks in advance. For more information, call x30304.

EAA badges — Dependents and spouses may apply for photo identification badges from 6:30-9 p.m. Monday-Friday. Dependents must be between 16 and 23 years old.

Defensive driving — Course is offered from 8 a.m.-4:30 p.m. Sept. 18. Cost is \$19.

Weight safety — Required course for employees wishing to use the weight room is offered from 8-9:30 p.m. Sept. 8. Pre-registration is required; cost is \$5.

Aerobics — High/low-impact class meets from 5:15-6:15 p.m. Tuesdays and Thursdays. Cost is \$32 for eight weeks.

Exercise — Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24 for eight weeks.

Aikido — Martial arts class meets from 5-7:30 p.m. Tuesdays. Cost is \$15 per month.

Country and western dance — Beginner class meets from 7-8:30 p.m., and intermediate class from 8:30-10 p.m. Mondays beginning Sept. 27. Cost is \$20 per couple.

Softball tournament — Men's open "C" double elimination tournament will be Sept. 25-26. Registration deadline is 7 p.m. Sept. 23; cost is \$95.

Fitness program — Health Related Fitness Program includes a medical examination screening and a 12-week individually prescribed exercise program. For more information, call Larry Weir at x30301.

JSC

Swap Shop

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be run only once. Send ads to Roundup Swap Shop, Code AP3, or deliver them to the deposit box outside Rm. 147 in Bldg. 2. No phone or fax ads accepted.

Property

Lease: Meadowbend, 3-2-2, FPL, fenced, miniblinds, fans, no pets, avail Oct 1, \$795/mo. Jim, x35852 or 474-7747.

Rent: New Orleans condo, French Quarter, skyline view, priv rooftop deck, furn, sleeps 4, avail Oct 22-29, \$400. 282-6422 or 280-8927.

Rent: Winter Park, Colorado condo, furn, sleeps 6, biking, hiking, fishing, low summer rates thru Oct. 488-4453.

Rent: Nassau Bay, 4-2-2, recently remodeled, \$895/mo. Minh, x30992 or 484-2456.

Sale: LC/Meadowbend, 4-2-2, FPL, ceiling fans, newly landscaped, \$70.9k negotiable, assumable. Peter, 526-1853.

Sale: Dickinson, Cheyenne subdivision, 3-2-2, 1 yr old, auto gar dr, landscaping, \$72k. 484-0392.

Sale/Lease: Kemah, 4-2-2, game rm, blinds, deck, gar dr opnr, skylight, formal dining, boat ramp, no pets, \$77k or \$775/mo + dep. 334-2335.

Sale: Cancun, Mexico, 2-2, Nov 13-20, was \$1.4k, now \$700. 992-3876.

Lease: Tranquility Lake condo, 1 BR, W/D, ceiling fans, micro, \$475/mo. x30189 or 333-2482.

Rent: Univ Trace condo, 1 BR, 1-study, incl W/D, storage, patio, alarm sys, \$460/mo + \$250 dep. Cindy, 337-6270.

Rent: Magic Tree Resort, Orlando FL, sleeps 6, 2-2, furn, wk of Sept 19-26, \$450 OBO. Vann, x36027.

Sale: Sagemont, 3-2-2, both formals, den, new carpet, new roof. Ben, x34339 or 481-1439.

Sale: Univ Green patio home, 3-2-2, 1800 sq ft, new carpet, roof, cathedral ceilings, FPL, lg lot. Huey, 994-7652.

Sale: Meadowbend, 4-2-2, lg living rm w/FPL, cathedral ceiling, under market at \$67,775, monthly rates \$668. 947-3166.

Sale: 30 acres, brick home, 1/2 mi frontage on FM1798. D. Jamison 903-657-3829.

Lease: Seabrook, 3-2-2, brick, approx 1800 sq ft, \$750/mo. 474-2857.

Sale: Friendswood/Forest Bend, 3-2-2, new roof, paint, child's playhouse, lg backyard, upgrades, \$72k negotiable. Ted, x36894 or 992-4814.

Sale/Lease/Swap: Spring, 3-2-2, 1740 sq ft, wooded subdivision, \$75k. Ellen, 326-4973.

Sale: Angleton, 2 wooded acre lots on corner, side by side, near lake, amenities, \$22k negotiable. 489-7286.

Cars & Trucks

'88 Toyota Celica All Trax, red, blk leather int, 5 spd, 40k mi, loaded, pwr moon roof, new tires, ex cond, \$10k. x37088 or 488-1335.

'83 Subaru GL, 4 dr, auto, sunroof, AM/FM, AC, good cond, 138k mi, \$1.2k OBO. 333-3489.

'93 Chevy Ext Cab PU, take over pymts + \$500 dn, \$95/wk with JSC FCU, red, gray int,

V6, 5 spd, AC, P/O cass deck, bed cover, ex cond. Ray, 992-4064.

'85 Honda Prelude, 59k mi, AC, sunroof, new Pioneer CD player, JBL rear spkr, \$4k. Linda, x32885 or 538-1028.

'84 Mazda RX7 GSL SE, red, 5 spd, \$3450. 326-3737.

'81 Toyota Celica, runs good, auto, \$1.2k OBO. 283-1285 or 992-3642.

'77 Toyota Celica GT, liftback, 40k mi on replaced eng, auto, AC, AM/FM, wht, new paint, \$1.5k. 480-7207.

'82 Ford Window Van, 6 cyl, \$2.1k. Phil, x36166 or 326-1408.

'91 Nissan Stanza XE, auto, air pwr windows, pwr locks, tilt, cruise, AM/FM/cass, 58k mi, \$8.4k. James, x40045 or 332-1129.

'84 Ford Mustang GT, V8, auto, rebuilt trans, \$3.7k. x45122 or 332-6477.

'76 Pontiac Catalina, 350 block eng, AC, \$950. 486-3984 or 280-2542.

'87 Ford Taurus GL wagon, good cond, \$3.4k. Jeff, x37388.

'93 Ford F150 Supercab, 5.0L V8, PS/PB/PW, cruise, captains chairs, fiberglass tonneau cover, 15k mi, \$16.9k. Tom, 333-7497 or 992-4891.

'88 Corvette, red, 29k mi, ex cond, \$16k OBO. 554-4799.

'89 Dodge Grand Caravan LE, 38k mi, loaded, \$9.9k. Andy, x48719 or 474-2421.

'88 Pontiac Grand AM LE, blk, 2 dr, 2.3 Quad 4, 5 spd, sunroof, AM/FM/cass, elec W/L/S, 79k mi, \$3.7k. Dan, x30764 or 334-5270.

'87 Hyundai Excel, 3 dr hatchback, AC, cass, 4 spd, shop manual, 38k mi, garaged, \$2550. x38614 or 481-3787.

'72 Datsun 240Z, good cond, 2500 mi on rebuilt eng, \$3.5k. Larry, x33946 or 480-0803.

'84 Riveria, orig owner, ex cond, 76k mi, new tires/batt, factory sec, auto door locks, 4w disk brakes, \$3.9k. Sterling, 335-2123 or 538-4480.

'85 Honda Goldwing Interstate, 3rd owner, adult ridden, prof maintained, new tires, batt, fresh tuneup, oil/filter change, inspection sticker, \$4k. Gene, x36424 or 482-0139.

Boys 20" Diamond Back, Photon bike, ex cond, \$75. Karen, x31189 or 482-8177.

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JSC

Dates & Data

Today

Labor Day — Most JSC offices will be closed in observance of the Labor Day Holiday.

Tuesday

Blood drive — Lockheed will host a blood drive from 8-11:30 a.m. and 1-3:30 p.m. Sept. 7 at Lockheed Plaza 4. For more information, call Gayle Brown at 333-6514.

Cafeteria menu — Special: turkey and dressing. Entrees: baked meatloaf, barbecue spare ribs, liver and onions, baked chicken, French dip sandwich. Soup: black bean and rice. Vegetables: steamed broccoli, California vegetables, breaded squash, savory dressing.

Wednesday

Freedom Fighters meet — The Space Station Freedom Fighters will meet from noon-5 p.m. Sept. 8 at the McDonnell Douglas Bldg. at Space Center and Bay Area Blvd. For more information, contact David Cochran at 482-7005.

Blood drive — Lockheed will host blood drives from 8-11:30 a.m. and 1-3:30 p.m. Sept. 8 at Lockheed Plaza 3 and from 1:30-4 p.m. Sept. 8 at Lockheed Plaza 5. For more information, call Joan Wade at 282-65009.

Cafeteria menu — Special: Mexican dinner. Entrees: Parmesan steak, beef cannelloni, catfish and hush puppies, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: peas and carrots, ranch beans, mustard greens, Spanish rice.

Thursday

SSQ meets — The Society for Software Quality will meet at 5:30 p.m. Sept. 9 at the Days Inn, 2020 NASA Road 1. Mark Paulk of Carnegie-Mellon's Software Engineering institute will discuss SEI's Capability Maturity Model. For more information, call Felix Balderas at x31899.

Blood drive — Lockheed will host a blood drive from 8 a.m.-11:30 a.m. and 1-3:30 p.m. Sept. 9 at Lockheed Plaza 1. For more information, call Gayle Brown at 333-6514.

Cafeteria menu — Special: smothered steak. Entrees: chicken and dumplings, corned beef and cabbage, broccoli cheese quiche, steamed fish, French dip sandwich. Soup: navy bean soup. Vegetables: steamed cabbage, cauliflower au gratin, buttered carrots, lima beans.

Friday

Cafeteria menu — Special: baked meatloaf. Entrees: baked scrod with Hollandaise, broiled chicken, pork and beef egg rolls, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: stewed tomatoes, seasoned spinach, cut corn, macaroni and cheese.

Monday

Cafeteria menu — Special: Italian outlet. Entrees: chicken a la king, enchiladas with chili, baked lasagna with meat, steamed fish, French dip sandwich. Soup: split pea and ham. Vegetables: Brussels sprouts, oriental vegetables, buttered carrots, lima beans.

Sept. 11

JAC meets — The JSC Astronomy Club will meet at 7:30 p.m. Sept. 11 at the Lunar and Planetary Institute. For more information, call Bob Taylor at 929-2871.

Sept. 22

Graphics exhibition — The Information Systems Directorate will sponsor a graphics exhibition from 9 a.m.-4:30 p.m. Sept. 22 at the ISD Products Center in Bldg. 12, Rms. 254/256. Representatives from 16 software companies will demonstrate their software products. For more information, call the IPC at x37575.

Sept. 24

Slogan deadline — The deadline for Security Awareness Week slogan entries is close of business Sept. 24. NASA employees and contractors are invited to suggest slogans promoting good security practices. Four slogans will be selected. Send submittals to Joe Olivarez or Cindy King at JS2. Call King at x33251 for more information.

Sept. 27

Flu shots — The JSC Clinic will offer influenza vaccine inoculations from 10 a.m.-noon and 2-3:30 p.m. Sept. 27 through Jan. 31. For more information, call the clinic at x34111.

Oct. 31

Bike tour — The Lions Eye Bank of Texas and the JSC Bike Club are sponsoring the 15th Annual Texas Coastal Cruise. The ride will begin at 8 a.m. Oct. 31 at Clear Lake Park on NASA Road 1. For more information, call 798-5510.

8/regular 8 combination, \$50. Steve, x36725.

AM/FM/cass radio from '86 Toyota Celica, needs work, make offer. Leonard, 282-4044 or 333-5576.

AM/FM stereo, digital tuning, station mem, came from Plymouth Laser, \$40 OBO. Ted, x36894 or 992-4814.

IBM PS1 286, FD, mouse, modem, no HD, DOS 4.01, MS Works, Prodigy, crt, kybd, \$250 OBO. 333-6753.

Star NX 1000 multi-font printer, 200 cps, \$100; Magnavox computer monitor, green screen, \$100; Atari 800XL computer w/1050 disk drive, books, disks, \$125. 486-7635.

Abaton 300c color scanner for Mac, Photoshop plug-in w/1200 dpi interpolation, cable, sw, 1 yr warr, was \$750, now \$650. Chuck, 486-9335.

IBM XT 640kb, 20 MB HD, w/8087, Hercules graphics, IBM Proprietary, \$250. x31495 or 326-4991.

Photographic

Pentax SF-10 autofocus/flash w/28-70mm autofocus lens, \$300 OBO. 480-3527.

Pets & Livestock

Female calico cat, 1 yr old, shots current, front declawed, spayed, free. Leah, 486-1804.

Boxer/chow mix pups, ready 9-24. Laurie, x35590 or 991-0821.

AKC black lab, 1 yr old, housebroken, comes w/extra large pet porter, \$250 OBO. 488-7982.

Small barn, 12x12 w/irons, pasture, cov wash rack, dressage arena, jumps, full care, \$185. Maureen or Kate, 409-925-2149.

AKC yellow lab retriever pups, field champion bloodlines, \$350. Mary Anne, x47701 or 280-8125.

Musical Instruments

Bundy flute, \$200. Steve, x36725.

B.C. Rich guitar w/case/stand, Crate 40c amp, NADY 201 handheld wireless mic, digital delay, ultima mic stand, \$1.5k. Kate, 471-3119.

Applause acoustic bass guitar w/pickup and bag, \$440. 480-9473.

Kurzweil K1000 synthesizer, \$1.1k; Roland R-8 Human Rhythm Composer Drum machine, \$500; ART Multiverb III digital effects processor, \$300; Peavey 8-channel line level mixer. Dennis x47809 or 280-0845.

'70s Fender Twin Reverb, 100 w, all tube, recently rebuilt, master volume, \$450. Chuck, x47475.

Baldwin spinet piano w/bench, walnut finish, good cond, was \$1.5k, now \$600. x39229 or 482-7873.

Guild Model D40C acoustic/elec guitar w/hardcase, solid spruce top, scalloped bracing, multiple binding, was \$1.6k, now \$595, will layaway. 280-9621.

Lost & Found

Lost set of keys in or around bldg 5, Toyota car key, house keys. Luis, x39425 or 482-2619.

Household

Kenmore dbl gas grill w/propane tank/utensils, ex cond, \$75. x44570 or 482-6879.

2 mirrors, 3' by 8'; 1 mirror, 3' by 4'; 2 beveled mirror strips, 4" by 8"; all mounting hardware, \$135 OBO; 3' sq glass table top w/beveled edges, \$60 OBO. Rob, x38061 or 486-1804.

Contemp wht dining tbl, 8 chairs, mirror inserts, protected fabric on chair bottoms, ex cond, was \$1.5k, now \$1k. 334-2963.

Full sz elec blanket, \$20; round decorative tbl, 28" dia, \$15; Wards dryer, \$40. 480-3424.

Dining rm tbl, 1/4" circular glass top, 4 matching chairs, wht, \$125. Casey, x46349 or 481-1835.

Bedroom set, dbl bed/nitstand, \$40; dresser, \$20; desk/chair, \$20. Mike, 554-2233.

Canister vacuum, \$20; Collegiate type reclining chair, earthtone, \$25. Mary Jo, 554-2233.

Couch, ivory w/pastel florals, \$75; 2 end tbls, \$25/ea; 3 level bookcase, \$25; desk/chair, \$175; elec weedeater, \$20; entertainment center, \$20; Singer vacuum, upright, \$30; 2 - 21" color tv's, not working, make offer. Steve, x34189 or 486-5801.

Light color sofa. 326-2805.

On sz 5 pc black lacquer BR set, ex cond, \$700. x30189 or 333-2482.

Handmade pine bookshelves, \$40/each. 474-5609.

Round kitchen tbl w/4 chairs, solid wood, ex cond, \$300 OBO. 333-4102.

Kg sz waterbed, 8 drwrs, hdbd w/mirror/ lights, Hibernation motionless matt w/heater, blk w/brass trim, \$400 OBO. x35107 or 474-4742.

Rolltop desk, solid oak, 55" width, was \$1k, now \$350. 280-9621.

Rolltop desk, swivel chair, desk lamp, ex cond, \$350. x32202 or 992-3642.

Executive desk, computer storage unit/chair, unfinished walnut desk, upright storage unit, \$995. Dale, x48179 or 481-0046.

Wht twin captain's bed, incl lighted nitstand, desk, hutch, chair, dresser w/mirror, good cond, \$600 OBO. 332-3840.

Cream sleeper sofa, gold rocker recliner, \$150 both OBO. x31495 or 326-4991.

Wht twin captain's bed, incl lighted nitstand, desk, hutch, chair, dresser w/mirror, good cond, \$600 OBO. 332-3840.

Cream sleeper sofa, gold rocker recliner, \$150 both OBO. x31495 or 326-4991.

Wht twin captain's bed, incl lighted nitstand, desk, h



Friends bid Aaron Cohen adieu

More than 700 attend gala farewell celebration

Friends, family members and coworkers of retiring JSC director — now professor — Aaron Cohen gathered Aug. 23 at Space Center Houston to honor him for his 31 years of service to America's space program.

The program included testimonials and tributes from NASA Administrator Daniel S. Goldin, Rep. Jack Brooks, D-Texas, and a number of JSC senior staff members. Cohen's sons and daughters also shared thoughts on their father's retirement to become Texas A&M Zachry professor of engineering.

More than 700 people attended the gala celebration.

From left to right, top to bottom:

1) The Space Center Houston plaza is filled with gala guests.

2) Rep. Jack Brooks, left, joins Cohen and his wife, Ruth, for the festivities.

3) Associate Administrator for Space Flight Jed Pearson pins a NASA Distinguished Service Medal on Cohen. Cohen is only the second person in history, after the late Deke Slayton, to receive four of the prestigious honors.

4) Gala guests sign the register, which was given to Cohen as a memento.

5) Cohen poses with his family members and a special NASA plaque that was presented by Acting JSC Director Paul J. Weitz. From left are Cohen's daughter, Nancy Santana and her husband, Sam; son Daniel and his wife, Joan; Mr. and Mrs. Cohen; and son David and his wife, Miriam.

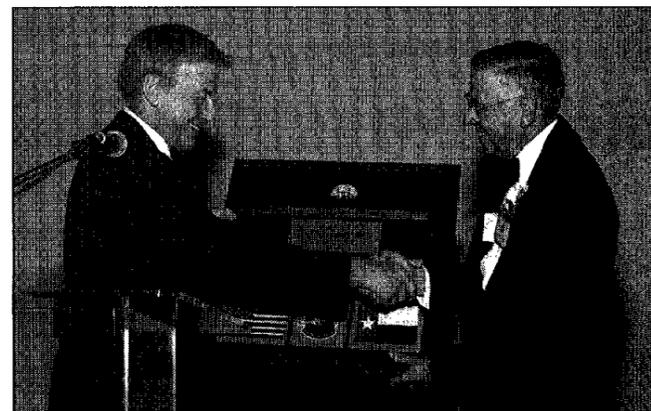
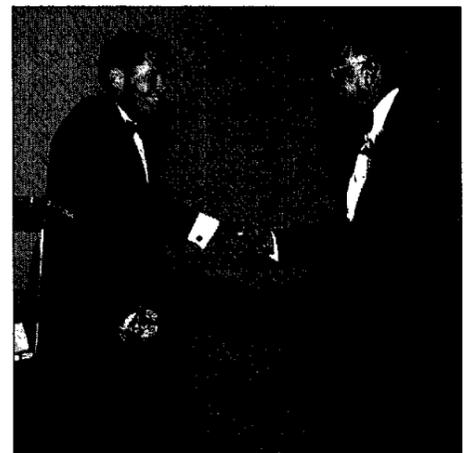
6) Joe Kerwin, former astronaut and Space and Life Sciences director, presents a personal gift at the reception.

7) Flight Crew Operations Director Dave Leestma presents Cohen with an astronaut flight jacket.

8) Cohen makes his parting remarks in the Space Center Theater.

9) Weitz presents a commemorative plaque that includes a photo of the Earth as seen from the lunar surface, American and Texas flags and an STS-1 crew patch.

10) Bob Minor, president of Rockwell International's Space Systems Division, presents a plaque commemorating the Aaron Cohen Research Grant, which Rockwell donated to Texas A&M on his behalf. □



Hubble astronomers find double 'x-ray burster' star

Astronomers using the Hubble Space Telescope have taken an image for the first time of a double star that is emitting enormous amounts of x-ray energy that previously could be "seen" only by instruments that detect x-rays.

"I was just doing a routine study of the dynamics and population of stars in the cluster which harbors this binary (double star) system," said Dr. Ivan King of the University of California at Berkeley. "My decision to take an ultraviolet image was a shot in the dark."

He noted that the double star never could have been seen with ground-based telescopes. However, Hubble's high resolution and ultraviolet sensitivity clearly distinguished the

star from the others around it. King's picture was obtained by the European Space Agency's Faint Object Camera.

The binary system is in the heart of a dense globular cluster of stars called NGC 6624. It is about 30,000 light years from Earth in the constellation Sagittarius.

One binary system member is a neutron star, the corpse of a massive star that exploded eons ago. It is extremely dense and compact, and exerts a powerful gravitational pull. Its companion, which has less mass, is a white dwarf, the remnant of a burned-out star which once was like Earth's sun.

The two stars are only about 100,000 miles apart and complete one orbit of each other every 11 minutes, making it the fastest binary system known.

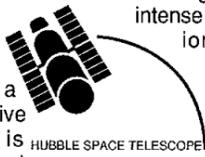
During this deadly dance, the neutron star's intense gravity strips helium from its companion, accumulating a disk of the gas around the neutron star. This continuous infall of gas produces a steady stream of x-ray energy. The energy, or radiation, heats the gas disk to temperatures greater than 100,000 degree Fahrenheit.

When enough super-hot helium accumulates in the disk, it spontaneously ignites with the force of an enormous nuclear fusion bomb. The

outburst of energy is of far greater intensity than the steady infall emission and is called an "x-ray burster." Astronomers have identified about 30 x-ray bursters in the universe, most near the center of the Milky Way galaxy.

Astronomers are interested in binary systems like this to gain greater insight into the physics of matter falling onto gravitationally powerful, compact objects such as neutron stars and black holes. This mechanism is thought to be the primary source of energy in a variety of exotic objects in the universe, ranging from x-ray sources in the Milky Way to quasars, the most energetic objects known.

HST is a cooperative effort of NASA and the European Space Agency.



JSC Clinic will offer flu shots

Flu season is fast approaching and the JSC Clinic is offering vaccinations for all NASA-badged and on-site contractor personnel beginning Sept. 27.

Vaccinations will be available daily from 10 a.m.-noon and 2-3 p.m. Sept. 27-Jan. 31. Shots are recommended for people at increased risk for contracting the disease, including people over 65 years of age or who have chronic cardiovascular or pulmonary system illnesses. The Center for Disease Control further advocates shots for anyone who lives with or cares for someone in this category. It takes two weeks for immunity to the virus to build up in your system after being vaccinated.

Influenza occurs every year throughout the U.S. but it is impossible to predict where or how severe the outbreak will be. Symptoms include fever, muscle aches, chills and respiratory distress. The vaccine may reduce your chance of contracting the virus.

Anyone requesting a flu shot will be asked to sign an informed consent form. For more information, call the clinic nurses station at 37783.

JSC Astronomy Club offers telescope project

The JSC Astronomy Club is providing telescope enthusiasts with an opportunity to build their own eight-inch telescope in a supervised environment.

Working in a small group, participants will receive one-on-one help while building their telescopes. Minimum group size is six people and the cost for materials and parts is \$250.

The group will meet in the evenings, working together to produce quality instruments at less than half the market price. The Astronomy Club has sponsored three previous telescope-building projects. For details, call Bob Taylor at 929-2871.



Dr. Charles LaPinta, center, presents Kelsey/Seybold employees with the FAA Good Friendship Award. From left are Chuck Shannon, Larry Busch, Herb Foss, Gene Hackemack, LaPinta, Sharon Bedahl, Gordy Baty, Chuck Beckman, and seated, Mike Fox and Marv Griffiths.

Medical Operations team earns FAA honors

By Eileen Hawley

The Federal Aviation Administration has awarded its Good Friendship Award to the Kelsey/Seybold Manned Test Support Section of the Medical Operations Branch in recognition of their support of FAA flight safety standards.

The award was presented to the MTSS staff by Dr. Charles K. La Pinta, chief of the Space & Life Sciences Directorate's Physiological Training Section.

As part of an interagency agreement, the MTSS provides FAA-mandated physiological training to designated individuals one day per month. Test subjects are selected by the FAA and include flight controllers, mechanics, flight attendants, and pilots. The

training is done at no cost to NASA and includes a series of lectures on the physiological aspects of flight. Program participants are also placed in the decompression chamber where they experience some of the physical changes discussed in the lectures, including hypoxia intoxication and a sudden rapid decompression of the chamber.

The award is presented annually to organizations that promote and enhance the FAA flight standards safety mission. This is the second time in two years that Kelsey/Seybold personnel have been recognized by the FAA for contributions to flight safety. The previous award was for promoting aviation safety through a series of public lectures and talks.

Winkler receives honor for advancing women at JSC

Lyn Gordon-Winkler, manager of the New Initiatives Strategy and Planning Office, has been awarded the 1993 Virginia B. Hughes Award for significant contributions to the advancement of women at JSC.

Acting JSC Director Paul J. Weitz presented the award on the opening day of the recent Federal Women's Program Training Conference at the Gilruth Center. She was selected from a number of nominees by the FWP Council.

Winkler, who also was honored for outstanding individual performance by a civil service employee, is responsible for managing the development and implementation of strategic plans and concepts for future JSC activities. She also coordinates development of project plans for all New Initiatives Office projects.

She began her career at JSC in 1973 as a management intern in procurement, and worked in the Space Station Program Office before moving to New Initiatives.



Winkler

ISD to host computer Graphics Exposition

The Information Systems Directorate will host a Graphics Exposition to be held from 9 a.m.-4:30 p.m. Sept. 22.

The event will be in the ISD Products Center, Bldg. 12, Rms. 254 and 256. Sixteen vendors will be on hand to explain and demonstrate their graphics software products. Mini-seminars by each exhibitor are scheduled throughout the day.

NASA-badged personnel and on-site contractors are invited to attend the exposition. Exhibitors scheduled to participate are: AutoDesk, Inc., Claris Corp., Computer Associates International, Inc., Computer Support Corp., Falcon Microsystems, Frame Technology Corp., Haven Tree Software Ltd., Inset Systems, Intergraph Corp., Island Graphics Corp., Keatron Software Corp., Lotus Development Corp., Lucas Management Systems, Micrografix, Inc., Software Publishing Corp., and WordPerfect Corp.

Goldin urges JSC employees to focus on importance of station

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an important mission. Don't be afraid to go look for help."

Goldin said the station is crucial to America and the world for six reasons.

First, it will be a new laboratory that takes industrial process development to the next level. Humans have learned to use the variables of temperature, mixture and pressure in these processes. The ability to use the absence of gravity to overcome convection, sedimentation and buoyancy could have as big an impact as all the other different process variables.

Second, development of an efficient space station will teach us how

to be frugal with resources, something that clearly can help people on Earth. For example, he said, the average American uses 100 gallons of water a day. Astronauts living on the space station will use only four gallons a day. Similar economies are expected in providing food for station crews, managing solid waste, and recycling breathing air.

Third, the space station will allow researchers to learn more about the effects of gravity — the single largest driving force on anyone's body — on humans by allowing the study of normal people in an abnormal environment. The lessons learned with teach us how to better live in space, and hopefully provide insight that will allow

doctors to develop better ways to counteract the detrimental effects gravity can have on humans on Earth.

Fourth, the station will be a pathfinder for systems integration and the convergence of technologies as America transitions out of a manufacturing age.

Fifth, it will provide an opportunity for the nations of the world to work together for a common, productive purpose.

"This is the largest technological international project in the history of our planet where we weren't building weapons," Goldin said. "The countries will be working on things with the joint objective of making life on this planet a lot better."

"We are sitting right at the edge of history. At 3:30 today, Prime Minister Chernomyrdin is going to be touring the Johnson Space Center. The number two man in Russia is coming here and soon thereafter there are going to be discussions between him and the Vice President about energy in space. Just think of the possibilities. Here's an opportunity for countries to work together."

The sixth and most important reason is the spirit, intellectual nourishment and inspiration people will be able to derive from a space station.

It is important for NASA employees to keep their eyes trained on the goal of building a safe, productive space station because if the agency can't

deliver on that project it won't get the chance to attempt others.

"If we lose sight of what's important, and we look upon the space station as a place where we'll have jobs and earn money and build a career, we've lost the whole reason for the space station and the trust our country has put in us," Goldin said. "Probably the most important thing that could happen is the people at NASA will start coming together and start focusing on the high ground and not worrying about the details and meet this very, very important mission. We cannot go another nine years and have more design reviews and more discussions and more debates and more tests but nothing on orbit."

Columbia to roll out five days after Discovery launch

(Continued from Page 1)

series of space walks designed to refine space walk planning and training, on the fifth day. If Discovery launches on time, STS-51 may likely be a 10-day-long flight, however, it has been planned as a nine-day mission.

Last week, preparations at Launch Pad 39B included closeouts of

Discovery's avionics bays, applying foam insulation to the main engine connections, and preparing to close up Discovery's engine compartment for the flight. During the weekend, a test of the ACTS satellite was scheduled as well as servicing of the ORFEUS telescope to replenish its supply of argon, used for cooling the scientific instruments.

Meanwhile, Columbia is connected to the solid rocket boosters and external fuel tank for STS-58. Columbia will roll out to Pad 39B about five days after Discovery launches. And preparations of Endeavour for STS-61, the Hubble Space Telescope servicing flight, remain on schedule toward an early December liftoff. Endeavour re-

mains in KSC's Bay 1 shuttle processing hangar, and work this week included installation of the Global Positioning System receiver to be used during the mission, tests of the forward steering jets, and leak checks of the hydrogen and oxygen tanks used to hold the gases combined to generate electricity for the spacecraft in orbit.

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